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| 10/766,150 | 01/27/2004 | Mario Davila | 97168-00002 | 1956 |

7590 06/23/2006
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| EXAMINER |
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PRICE, CRAIG JAMES

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| ART UNIT | PAPER NUMBER |
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3753

DATE MAILED: 06/23/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/766,150

Applicant(s)

DAVILA ET AL.

Examiner

Craig Price

Art Unit

3753

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 27 January 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-3 and 9-23 is/are pending in the application.
- 4a) Of the above claim(s) 4-8 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-3 and 9-23 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☒ Claim(s) 1-3 and 9-23 are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a). Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Election/Restrictions

1. The restriction on 6/13/06 is vacated.
2. Restriction to one of the following inventions is required under 35 U.S.C. 121:
 - I. Claims 1-3, and 9-23, drawn to regulator, classified in class 137, subclass 269.
 - II. Claims 4-8, drawn to the methods of changing the flow capacity of the regulator, classified in class 137, subclass 14.

Because these inventions are independent or distinct for the reasons given above and have acquired a separate status in the art in view of their different classification, restriction for examination purposes as indicated is proper.

During a telephone conversation with Mr. Sanjiv Chokshi on 18 May 2006 provisional election was made without traverse to prosecute the invention of Group I, claims 1-3, 9-23. Affirmation of this election must be made by applicant in replying to this Office action. Claims 4-8 are withdrawn from further consideration by the examiner, 37 CFR 1.142(b), as being drawn to a non-elected invention.

Applicant is advised that the reply to this requirement to be complete must include (i) an election of a species or invention to be examined even though the

requirement be traversed (37 CFR 1.143) and (ii) identification of the claims encompassing the elected invention.

The election of an invention or species may be made with or without traverse. To reserve a right to petition, the election must be made with traverse. If the reply does not distinctly and specifically point out supposed errors in the restriction requirement, the election shall be treated as an election without traverse.

Should applicant traverse on the ground that the inventions or species are not patentably distinct, applicant should submit evidence or identify such evidence now of record showing the inventions or species to be obvious variants or clearly admit on the record that this is the case. In either instance, if the examiner finds one of the inventions unpatentable over the prior art, the evidence or admission may be used in a rejection under 35 U.S.C.103(a) of the other invention.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 1-3 are rejected under 35 U.S.C. 102(b) as being anticipated by Beavers (4,719,940).

Beavers discloses a fluid pressure regulator having a fluid inlet (80), a fluid outlet (84), an orifice (116 through 66) of a first dimension disposed between the fluid inlet and the fluid outlet, and a stem (106) of a second dimension extending through and disposed within the orifice, the second dimension being smaller than the first dimension such that the fluid pressure regulator exhibits a first flow capacity that depends, at least partially, on the relative sizes of the first and second dimensions, the improvement wherein the stem is selectively replaceable (the stem can be removed and replaced with another stem by dis-assembly of 66 from 12, and 78 from 106) with another stem of a third dimension that is smaller than the first dimension and different than the second dimension, whereby the flow capacity of the fluid pressure regulator is selectively changeable from the first flow capacity to a second flow capacity that depends, at least partially, on the relative sizes of the first and third dimensions as shown in figures 1 and 2.

Regarding claim 2, Beavers discloses that the regulator further comprises a flexible diaphragm disposed between the orifice and the fluid outlet, wherein the stem of a second dimension is operably coupled to the flexible diaphragm (figures 2 and 3 show the separation of parts depicting that the regulator is configured for this limitation), and the stem of a second dimension is selectively detachable from the flexible diaphragm so as to permit the replacement of the stem of a second dimension with the stem of a third dimension.

Regarding claim 3, Beavers discloses that the fluid pressure regulator further comprising a body (12,14,66) having walls, which at least partially define the orifice,

wherein the flexible diaphragm is disposed within the body as shown in figure 1.

5. Claims 9-14 are rejected under 35 U.S.C. 102(b) as being anticipated by Mims et al. (5,392,825).

Regarding claim 9, Mims et al. disclose a fluid pressure regulator having a fluid inlet (80), a fluid outlet (34), an orifice (surrounding 108) disposed between the fluid inlet and the fluid outlet so as to permit fluid to flow in a downstream direction through the orifice from the fluid inlet to the fluid outlet, a flexible diaphragm (96) disposed downstream of the orifice, a diaphragm chamber at least partially defined by the flexible diaphragm, and a stem (108) operably coupled to the flexible diaphragm and extending through the orifice, the improvement wherein the stem is detachably coupled to the flexible diaphragm such that, after detachment of the stem from the flexible diaphragm, the stem may be removed from the fluid pressure regulator without removing the flexible diaphragm (by removing 66, the stem can be removed without removing the diaphragm) as shown in figure 5.

Regarding claim 10, Mims et al. disclose a main compression spring (104) located downstream of the orifice for counteracting a fluid pressure within the diaphragm chamber, and wherein the stem is removable from the fluid pressure regulator without removing the main compression spring as shown in figure 5.

Regarding claim 11, Mims et al. disclose a bonnet for retaining the compression spring, and wherein the stem is removable from the fluid pressure regulator without removing the bonnet as shown in figure 5.

Regarding claim 12, Mims et al. disclose that the stem is sized and shaped such

that, after detachment of the stem from the diaphragm, the stem may be removed from the orifice in an upstream direction as shown in figure 5.

Regarding claim 13, Mims et al. disclose that a post (102) operably coupled to the flexible diaphragm, the stem being detachably coupled to the post as shown in figure 5.

Regarding claim 14, Mims et al. disclose that the post is movable relative to the flexible diaphragm as shown in figure 5, and the post is moveable in as much is applicants.

6. Claims 16-23 are rejected under 35 U.S.C. 102(b) as being anticipated by Mims et al. (5,392,825).

Regarding claim 16, Mims et al. disclose a fluid pressure regulator, comprising a mounting base (the exterior surface of 46 projecting along with 66) including a fluid inlet (80) and a fluid outlet (34), and a pressure control module (main components in this view 6) coupled to the mounting base, the pressure control module including a body (46), an orifice (surrounding 122) disposed within the body between the fluid inlet and the fluid outlet so as to permit a fluid to flow in a downstream direction through the orifice from the fluid inlet to the fluid outlet, and a filter (118) disposed within the body between the orifice and the fluid inlet so as to permit at least a portion of the fluid to flow through the filter before flowing through the orifice as shown in figures 5 and 6.

Regarding claim 17, Mims et al. disclose a stem extending through and disposed within the orifice (122) as shown in figure 5.

Regarding claim 18, Mims et al. disclose that the filter is removable from the body via a hole in the body disposed upstream of the orifice between the fluid inlet and the orifice (in as much the same manner as applicant's device is configured).

Regarding claim 19, Mims et al. disclose a regulator further comprising a seat (117) sized and shaped to close the orifice, the seat being disposed upstream of the orifice between the filter and the orifice (in as much the same manner as applicant's device is configured).

Regarding claim 20, Mims et al. disclose a pressure regulator, comprising a mounting base (the exterior surface of 46 projecting along with 66) including a fluid inlet (80) and a fluid outlet (34), and a pressure control module (the main components in this view 6) coupled to the mounting base and including a body (46), an orifice (surrounding 122) within the body between the fluid inlet and the fluid outlet so as to permit a fluid to flow in a downstream direction through the orifice from the fluid inlet to the fluid outlet, an access plug (66) disposed in the body between the orifice and the fluid inlet and including a conduit (inner bore surrounding 124) formed in the plug so as to permit at least a portion of the fluid to flow through the plug (there is no sealing mechanism in this inner bore, therefore fluid can flow through this area) before flowing through the orifice, and means (the mating threads of the body and module) for permitting the access plug to be removed from the body so as to provide access to a replaceable component of the pressure control module disposed at least partially upstream of the orifice (by providing access to 122 which is at least partially upstream of the orifice it is surrounded by) as shown in figures 5 and 6.

Regarding claim 21-23, Mims et al. disclose that the filter, stem and spring are replaceable (the components are configured to be replaced once the module is removed).

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

8. Claim 15 is rejected under 35 U.S.C. 103(a) as being unpatentable over Mims et al. (5,392,825) in view of Beavers (4,719,940).

Regarding claim 15, Mims et al. has disclose all of the features of the claimed invention except that the post includes internal threads and the stem includes external

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threads which threadedly engage said internal threads such that the stem is detachably coupled to the post, the external threads of the stem being sized so as to permit removal of the stem from the orifice in the upstream direction.

Beavers discloses that the post (78) includes internal threads and the stem includes external threads (70) which threadedly engage said internal threads such that the stem is detachably coupled to the post, the external threads of the stem being sized so as to permit removal of the stem from the orifice in the upstream direction as shown in figures 2 and 3.

In view of the Beavers patent, it would have been obvious to one of ordinary skill in the art at the time of invention to employ the that the post includes internal threads and the stem includes external threads which threadedly engage the internal threads such that the stem is detachably coupled to the post, the external threads of the stem being sized so as to permit removal of the stem from the orifice in the upstream direction of Beaver onto the Mims et al. regulator in order to accommodate misalignment issues during assembly (Col. 5, Lns. 6-21).

Conclusion

9. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Dockson (2,103,576), Johnson (3,892,255), Love et al. (4,718,448), Gotthelf et al. (5,890,512), Ferrante (5,497,803), Ziegelmeyer et al. (5,372,159), Hassell (4,111,222), Hoffman et al. (3,926,208), Sugden Jr. (3,561,468), Moskow (3,072, 135) and Bucknam (1,264,006) all disclose similar regulators.

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Craig Price whose telephone number is (571) 272-2712. The examiner can normally be reached on 7AM - 5:30PM M-R.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Eric Keasel can be reached on (571) 272-4929. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

CP



14 June 2006



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